

The opinion in support of the decision being entered today was not written for publication in a law journal and is not binding precedent of the Board.

Paper No. 30

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte GURTEJ SANDHU
and PIERRE C. FAZAN

Appeal No. 2002-0514
Application No. 08/886,388



ON BRIEF

Before KRATZ, TIMM, and PAWLIKOWSKI, Administrative Patent Judges.
KRATZ, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on appeal from the examiner's final rejection of claims 44, 45, 51-54, 56, 58-60, 62 and 66-68, which are all of the claims pending in this application.

BACKGROUND

Appellants' invention relates to a product comprising a pair of adjacent stacked capacitors. Each capacitor includes a lower plate including a polysilicon plug. An understanding of the invention can be derived from a reading of exemplary claim 44, which is reproduced below.

44. A pair of adjacent stacked capacitors fabricated using a photolithographic process having a characteristic minimum photolithographic feature dimension on a semiconductor substrate, the adjacent stacked capacitors respectively including a lower plate having a minimum lateral spacing from one another which is less than the minimum photolithographic feature dimension, each lower plate including a polysilicon plug having a diameter less than the minimum photolithographic feature dimension.

The prior art references of record relied upon by the examiner in rejecting the appealed claims are:

Lee 5,684,316 Nov. 04, 1997

Morihara et al. (Morihara), "Disk-Shaped Stacked Capacitor Cell for 256 Mb Dynamic Random-Access Memory," Japanese Journal of Applied Physics, Vol. 33, Pt. 1, No. 8 (1994).

Wolf et al. (Wolf), "Silicon Processing for the VLSI Era," Volume 1: Process Technology, Lattice Press (1986), p. 493.

Claims 44, 45, 51-54, 56, 58-60, 62 and 66-68 stand rejected under 35 U.S.C. § 112, second paragraph as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as invention. Claims 44, 45, 51-54, 56, 58-60, 62 and 66-68 stand rejected under 35 U.S.C. § 112, first paragraph as containing subject matter which was not described in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Claims 44, 45, 51-54, 56, 58-60, 62 and 66-68 stand rejected under 35 U.S.C. § 103 as being unpatentable over Lee in view of Wolf and Morihara.

We refer to appellants' brief and to the examiner's answer and final rejection for an exposition of the respective viewpoints expressed by appellants and the examiner concerning the rejections.

OPINION

We shall sustain the examiner's § 112, second paragraph rejection. Moreover, since we can not ascertain the scope of the claims before us on this record, we procedurally reverse the § 112, first paragraph and § 103 rejections advanced by the examiner.¹ Our reasoning follows.

Appellants state that the appealed claims "stand or fall alone as one group" (brief, page 4). The appealed claims have not been separately argued with respect to the examiner's rejection of the appealed claims under the second paragraph of 35 U.S.C. § 112. Consequently, we select claim 44 as the representative claim for our consideration of that ground of rejection. See 37 CFR § 1.192(c) (7 and 8) (2000).

A principal purpose of the second paragraph of § 112 is to provide those who would endeavor, in future enterprises, to approach the area circumscribed by the claims of a patent, with

¹ We emphasize that this reversal is a technical reversal rather than one based on the merits.

adequate notice demanded by due process of law, so that they may more readily and accurately determine the boundaries of protection involved and evaluate the possibility of infringement and dominance. See In re Hammack, 427 F.2d 1378, 1382, 166 USPQ 204, 208 (CCPA 1970).

As the court stated in In re Moore, 439 F.2d 1232, 1235, 169 USPQ 236, 238 (CCPA 1971), the determination of whether the claims of an application satisfy the requirements of the second paragraph of Section 112 is

merely to determine whether the claims do, in fact, set out and circumscribe a particular area with a reasonable degree of precision and particularity. It is here where the definiteness of language employed must be analyzed -- not in a vacuum, but always in light of the teachings of the prior art and of the particular application disclosure as it would be interpreted by one possessing the ordinary level of skill in the pertinent art. [Footnote omitted.]

In order to satisfy the requirements of the second paragraph of § 112, a claim must accurately define the invention in the technical sense. See In re Knowlton, 481 F.2d 1357, 1366, 178 USPQ 486, 492-93 (CCPA 1973).

Applying these principles to the present case, we agree with the examiner that the language as used in representative claim 44 introduces uncertainty and inconsistency which would preclude one skilled in the art from determining the metes and bounds of the

claimed subject matter. As correctly determined by the examiner, claim 44 describes the recited product stacked capacitors, at least in part, by the process by which they are made. In so doing, claim 44 provides that the stacked capacitors are "fabricated using a photolithographic process having a characteristic minimum photographic feature dimension." No numeric value(s) or other clear definition for determining that "characteristic minimum photographic feature dimension" is furnished in appellants' specification.

This is significant because the allegedly patentable and distinguishing features of representative claim 44 include a polysilicon plug diameter and a minimum lateral spacing of lower plates of the stacked capacitors, each of which are measured as being less than "the minimum photolithographic feature dimension." In other words, the recited plate spacing and plug diameter are specified in terms of a minimum photolithographic feature dimension that is described as being characteristic of a photolithographic process by which the claimed product can be made. Yet, appellants' specification furnishes little guidance for determining the limits, particularly the upper limit, for that characteristic minimum dimension by which the plate spacing and plug diameter are measured.

Here, the examiner has reasonably determined that representative claim 44 is drawn to product stacked capacitors and is not limited by any particular photolithographic process by which it must be made.² Indeed, appellants (brief, page 5) urge that the claims, including representative claim 44, do not include any process steps and that any reference thereto as "product-by-process" claims by the examiner mischaracterizes the claimed subject matter. That argument of appellants serves to bolster the examiner's determination that representative claim 44 is in violation of the requirements of the second paragraph of 35 U.S.C. § 112 for a further reason in that appellants do not appear to be particularly claiming what the applicants regard as the invention. This is so since representative claim 44 is drawn to a product, which is defined at least in part by the process by which it can be made, subject matter which is in contrast to what appellants suggest is being claimed.

Moreover, the examiner (answer, pages 11-13) has reasonably determined that there are a number of ways that a characteristic

² The patentability of such product-by-process claims is determined based on the product itself. See In re Thorpe, 777 F.2d 695, 697, 227 USPQ 964, 966 (Fed. Cir. 1985) ("If the product in a product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior art product was made by a different process.").

minimum feature dimension could be determined and that representative claim 44 does not specify a particular photolithography method for fabricating the product but rather is open to a plethora of photolithographic methods, each of which could have a different characteristic photolithographic minimum feature dimension associated therewith. Hence, the specification provides little help in determining the metes and bounds of the claimed subject matter.

In addition, a process other than a photolithography process could be used to manufacture stacked capacitors by a potential infringer. In such a case, there would be no photolithographic process from which to derive a "minimum photolithographic feature dimension" of the potential infringer's product. Consequently, a potential infringer may have no way of determining whether the plate spacing and plug diameter of their device are less than that required by appellants' claims.

Appellants refer us to several other patents in an attempt at establishing that the claim terms in question are definite. We do not find that argument persuasive for reasons set forth by the examiner at pages 17-19 of the answer. The claims of this application are construed in light of the present application specification not the specifications of other patents.

Consequently, we sustain the examiner's 35 U.S.C. § 112, second paragraph rejection.

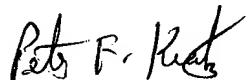
Since interpreting the appealed claims would require us to engage in speculation as to the meaning of terms and assumptions as to the scope of the claim, we cannot properly determine whether the claimed invention encompassed by the claims on appeal is in fact unpatentable over the other grounds of rejection advanced by the examiner. Consequently, we are constrained to reverse, pro forma, the examiner's rejection of the appealed claims under 35 U.S.C. § 112, first paragraph as non-enabled and as unpatentable under 35 U.S.C. § 103. We hasten to add that this is a procedural reversal rather than one based upon the merits of those rejections.

CONCLUSION

The decision of the examiner to reject claims 44, 45, 51-54, 56, 58-60, 62 and 66-68 under 35 U.S.C. § 112, second paragraph as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as invention is affirmed. The decision of the examiner to reject the appealed claims under 35 U.S.C. § 112, first paragraph and to reject the appealed claims under 35 U.S.C. § 103 as being unpatentable over Lee in view of Wolf and Morihara is reversed.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 CFR § 1.136(a).

AFFIRMED



Peter F. Kratz)
Administrative Patent Judge)
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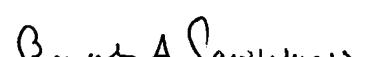
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